Innovation Versus Imitation: Defects in Western Thought and Their Impact on Institutionalized Learning

An Honors Thesis (HONRS 499)

by

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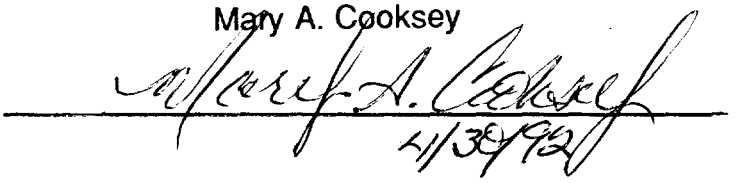

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Criticisms of American education are very common and come from a wide variety of sources. But the most insightful (and indicting) example of the problems in our schools that I have encountered occurred when I visited a junior high classroom. On this occasion the teacher passed out worksheets on putting pronouns into subjective and objective positions. Among the group of bored eighth graders sitting in perfectly straight rows of desks, I noticed one student looking at his sheet with a perplexed expression on his face. He turned to the student beside him, and the following exchange resulted:

Brian: "Didn't we have this stuff before?"

Derrick: "Yes."

Brian: "I thought so. Last year, right?"

Derrick: "And in sixth grade and fifth grade and even before that. But I still don't understand this stuff."

This scenario is repeated in classrooms across America thousands of times each day; repetition of information at the literal level through textbooks and worksheets. The result is little retention taking place because the information is never related to a larger context and connected to student interests and experiences. Why is this method of instruction still so prevalent and accepted in our schools? Why have reforms not eliminated this faulty method of teaching? I argue that the reason schools emphasize rote memorization is due to flaws not just in the pedagogy of education, but in the entire structure of Western thought which lead to numerous handicaps that restrain people intellectually, spiritually, and socially.

In his book Zen and the Art of Motorcycle Maintenance, Robert Pirsig blames this crisis plaguing modern day society on "a genetic flaw within the nature of reason itself" (110). He traces this mutation in Western thought all the way back to Plato,whom

the author believes greatly hampered the progress of human reason because the Greek philosopher argued successfully for truth over the Sophists' principle of excellence. The purpose of this paper is to explore Pirsig's hypothesis concerning this defect in reason and to postulate its devastating effects on Western thought. The first part of this study will examine the intellectual, spiritual, and social crises as described by Pirsig in his two books, Zen and Lila. Related topics will include the problems of rigid classification, the separating of science and technology versus values and ethics; consequences of this doctrine of objectivity, and the static resistance to positive change in Western institutions. The second part of this thesis will examine how American education is a microcosm of these problems. First, I will give a brief history of how schools have been resistant to change since the turn of the century, and how structures implemented for the express purpose of preparing students to become obedient manual labor workers are still in place today. Secondly, after demonstrating the resistance to change in schools, I will explore institutional problems including tracking and ethnic separation, disjointed curriculum, and lack of time spent on problem solving and higher-order thinking skills. Finally, I will propose solutions to bring about positive change in both American education and in the larger scope of the Western world through an examination of Pirsig's Metaphysics of Quality.

We live in a conceptually dualistic society from the God/Satan and Heaven/Hell dichotomy embraced by Christianity to the sharp linguistic distinction between the subject and predicate reflected in our grammar. (This grammatical subject-predicate division is not rigidly defined in cultures without Greek ancestry) (344). In the Western mode of thought, objects and ideas are evaluated in terms of true or false and yes or no. Answers that cannot be classified into these rigid categories are generally disregarded or considered irrelevant and even unreal. In fact, there is not even a word in the English language for an answer that does not fall within the two Western

classifications. The Japanese call this neutral type of answer mu meaning "no class; not one, not zero, not yes, not no" (314). Our conceptual classifications are dualistic in that they categorize in two rigid extremes: introvert/extrovert, liberal/conservative, religious/secular, intellectual/vocational, free will/determinism, dependent/independent, moral/immoral, logical/emotional, sanity/insanity.

These rigid, dualistic categorizations are insidiously harmful to Western man. Perhaps the most damaging is the separation that has resulted between science and technology versus values and ethics. There is nothing inherent in science and technology that makes it ugly or evil or uncontrollable. In fact, Pirsig points out that the Greek root word for technology, techne, originally meant art; the Greeks did not have separate words for art and technology (283). Yet today the word "art" conjures up an image of a painter brushing the finishing touches of a sunset onto canvas, while technology is more likely to evoke an image of Big Brother in Orwell's Nineteen-Eighty-Four or of the atomic bomb that killed 76,000 people in Hiroshima. Because of the images that have depicted technology as dehumanizing and unstoppable, it appears as the very antithesis of morality. The result is that no common ground between technology and ethics can be found; thus, a great separation between the two has occurred. The gap between technology and ethics has now grown so enormous that technology has become a scapegoat for all of society's problems. Some parents and educators have gone so far as to blame the impending downfall of Western civilization on the electronic innovations which have resulted in MTV and Nintendo! Because of the conceptual separation, these people consequently see technology as an unstoppable, dehumanizing monster that no one has any control over; a ubiquitous beast that keeps growing larger and larger, which makes their world spin further and further out of control.

However, this separation of science and ethics - which makes technology

appear so heartless and ugly - is nothing inherent and was not apparent at the beginning of science. Rather, this division is a relatively recent historical phenomenon. Stephen Toulmin - a British scholar and author of "Science and Ethics: Can They Be Reconnected?" - traces the beginning of the separation of science and ethics back to a movement he calls scientific purism, a deliberate process by which science has been fragmented into categorical disciplines and which asserts that moral criteria falls outside of the area of the sciences. He calls this "the crucial development in the history of nineteenth-century science" (Toulmin, 665).

Toulmin argues that no division existed between science and ethics at the beginning of the 19th century as the work of scientists such as John Ray and Joseph Priestly demonstrates. Before 1830, the Royal Society of London was a forum for all issues related to natural philosophy. Even into the second half of the 19th century, a "layman" such as British poet Alfred Tennyson was able to participate in Royal Society committees (668). However, a sequential change toward specialization and the exclusion of ethics from the realm of science occurred during the century due to the fact that philosophy and theology were gradually categorized out of the sciences.

One early example of scientific purism occurred when the Geological Society of London proclaimed in 1807 that "all arguments about the origin, antiquity, and creation of the earth" were to to excluded and study was to be limited to "direct observations of the earth's crust" (667). In the 1820s, Joseph Townsend could still combine Biblical history and geological science in his work The Veracity of Moses as an Historian. But before the 19th century was over, Biblical history and geochronology were categorically divided into separate disciplines as sciences gradually splintered into rigid categories such as organic chemistry and botanical taxonomy (666).

The puristic view of science is currently so dominating that few scientists feel it is their role to be concerned with morals in their restricted realm of study. Toulmin

notes the following development in scientific academies in the 20th century: "memberships. . . have been increasingly recruited on the basis of narrowing defining intellectual contributions of candidates alone, without regard to their social perceptiveness, ethical sensitivity, or political wisdom" (666). Arthur Kantrowitz of M.I.T. has even proposed the establishment of a Science Court which would evaluate cases only on the basis of "factual implications" and without any consideration for the ethical ramifications in each case (666).

The resulting specialization has left scientists with the impression that ethics have no place in science (or at least in their specialized field). Taking scientific purism to its inevitable extreme allows people to take the data of scientific experiments, call it technology, throw it upon the world without any regards for the implications, and then leave the morality of what has resulted up to the ministers and philosophers. The following passage in Lila demonstrates the absurdity of the argument that science is "value-free":

> A scientist may argue rationally that the moral question, "Is is all right to murder your neighbor?" is not a scientific question.But can he argue the moral question, "Is it all right to fake your scientific data?" is not a scientific question? can he say, as a scientist, "The faking of scientific data is of no concern of science?" (298).

This separation of science and ethics shows why many people blame the ubiquitous monster technology instead of the corrupt decisions that thoughtless inventors and greedy manufacturers (who are not usually held accountable for their actions) have brought society. Until technology is seen for the neutral system that it is and people realize that the ugliness is brought to it by scientific "specialists" and corrupt inventors, it will always be perceived as an uncontrollable, evil entity blamed for all of the problems brought about by progress. Meanwhile, the real culprits who do make

immoral technological decisions can continue to go on freely abusing.

The implied tenet of scientific pluralism - morality as "someone else's problem" - has had detrimental effects on our world. Everyone - including scientists - must recognize that their actions affect the lives of many other people. If a company executive believes that his or her only purpose is to maximize profits, he or she will use cost effectiveness as the only criteria for the disposal of toxic waste products. The result can be (and is) devastating to the rest of the world. The rigid classification which separates ethics from science shows how damaging the results of strict categorization can be.

Another defect in Western thought is what Pirsig calls the doctrine of objectivity. This is the idea that what a person likes or dislikes (or cares or does not care about) has nothing to do with his or her correct thinking (Zen, 274). According to this definition, the attitude of the two students mentioned at the beginning of this paper (Brian and Derrick) toward the pronoun worksheets will have no effect on their ability to learn grammar. The term also implies that those in the sciences cannot have emotional ties to what they are studying in order to get correct results; in other words, the doctrine of objectivity states that "when you're objective, you see everything undistorted" (Lila, 32). This idea is prevalent throughout all areas of Western thought, but it is most often associated with the sciences.

Pirsig explores the problems of objectivity embodied by anthropology. In Lila, he traces the origins of "objective" anthropology back to Columbia University professor Franz Boaz. Trained extensively in mathematics and physics, he believed in using only objective scientific criteria to receive anthropological data. Generalizations about cultures, according to Boaz, could only be made on the basis of examining great amounts of scientific data. He believed that "science could tolerate nothing 'subjective'; value judgments - and by infection, even values considered as

phenomena - must be absolutely excluded" (52). Boaz's views have dominated American anthropology for the entire 20th century.

Pirsig demonstrates what is wrong with objective anthropology through describing the experiences of his teaching colleague Verne Dusenberry, who loved Native Americans and spent his weekends and vacation time on their reservations. He wanted to use his knowledge gained over some 20 years of interaction and pursue a Ph.D. study on the Chippewa-Cree Indians. However, every American university turned his doctoral study proposal down. Why? Because he had not gathered his criteria objectively, and because he made it clear that he thought the doctrine of objectivity had no place in quality anthropological study. (Pirsig compares telling an objective anthropologist this to telling a staunch Catholic that the Pope has no place in the Church.) Because he refused to change his methods, Dusenberry was blackballed from pursuing his ideas at any American university. So in order to earn his Ph.D. on the study of a group of American Indians, he had to pursue his doctorate through a university in Uppsala, Sweden! (31-2).

Dusenberry argued that it is impossible for anthropologists to learn anything meaningful about Native Americans if they use objective methods only. He argued that "the only way to find out about Indians is to care for them and win their love and respect" (Lila, 32). When people outside Native American culture try to "scientifically" gather information of the Indians, the results are less than satisfactory. As Dusenberry notes:

> The Indians see that. They see it better than we do. And when they see it they don't like it. They don't know where in hell these "objective" anthros are at and it makes them suspicious, so they clam up and don't say anything . . . . Or they'll just tell them nonsense . . . which of course a lot of the anthros believe at first because they got it "objectively" . . .

and the Indians sometimes laugh at them behind their backs. (32)

The idea that scientific methods must be used to gather the best data about a culture is illogical. Who will truly get the best information about the values and attitudes of an Indian tribe? Is it the man who has interacted with them for 20 years? Or a social scientist who walks into a Native American community asking questions and writing down what he observes in a notebook? Pirsig argues that scientific methods should not be used exclusively in gathering data because "patterns of culture do not operate in accordance with the law of physics. How are you going to prove in terms of the laws of physics that a certain attitude exists within a culture . . . . How are you going to show *scientifically* that a certain culture has certain values?" (53). Consequently, throwing out all anthropological results that are not objective is ridiculous because there is not a way to examine the values and attitudes of a culture in the traditional scientific sense.

Before he fully understood the restrictive conventions in the objective-dominated social sciences, Pirsig had wanted his second book to be an anthropological study on how an experience with the drug peyote gave him new insights into the ceremonies of an Indian tribe. However, he quickly realized that because everything in anthropology must be objective, he knew that he could not write in the field of anthropology about his experiences with a hallucinogen. (The author argues that calling peyote a hallucinogen is culturally bias against Native Americans because the term is a derivative of hallucination, which is a form of insanity. He writes, "The Indians who use [peyote] . . . might with equal accuracy call it a 'de-hallucinogen' since it's their claim that it removes the hallucinations of contemporary life and reveals the reality buried beneath them" (Lila, 36).

The doctrine of objectivity is also damaging to Western man because of the idea that a person's attitude toward something does not affect his or her correct thinking;

this causes a believer in this doctrine to be emotionally separated from what he or she does. What results is a separation of object from subject. Insisting upon this subject /object division as solely a Western defect, Pirsig mentions the doctrine of Tat tvam asi, which is stressed in all of Oriental religion; it means that everything you think you are and everything you perceive is undivided (Zen, 136). According to Western objectivity, however, a division between object and subject is of no consequence. It should not matter that Brian and Derrick view the information on the worksheets as irrelevant to their lives. But there are, in reality, devastating consequences for believing that values do not affect correct thinking.

In Zen, Pirsig shows the results of the Western subject/object division through a humorous account in which he takes his motorcycle to a shop so a "professional" mechanic can repair a piston problem. Pirsig recalls seeing mechanics with unfocused expressions working while loud music played in the background. They behaved like "wrench twiddlers" (25) rather than craftsmen who put thought and concentration into their work. The seeds of separation (distracting music, lack of care, lack of identification with the job) were everywhere. After $140 worth of "maintenance," the author's cycle was no closer to being fixed. The author later discovers the problem with his machine to be a 25 cent pin in the oil-delivery system- a pin which a previous mechanic had sheared. The reason the mechanics botched the job so badly is simple: they were separated from their work. Yet the doctrine of objectivity state that the feelings the mechanics have toward their jobs, their tools, and Pirsig's motorcycle should have no effect on the job they do.

The author complains that the most important part of mechanical work - caring about what it is that you are doing - is left out of all Western technical manuals. He highly praises an Eastern instructional manual which begins, "Assembly of Japanese bicycle require great peace of mind" (159). But Western logic portrays peace of mind

as something superficial and unimportant.

The doctrine of objectivity is a hindrance when it comes to achieving Quality in any endeavor because any person - whether he or she is a writer, a mechanic, a scientist, a teacher, or a drill press operator - must care in order to do is or her highest quality work. But caring is not a part of this doctrine nor is it an integral part of Western logic. The formal scientific method asks the scientist to use only his or her logical side and to repress the emotional. This is unrealistic and it adds heaping coals to the raging fire of nihilistic pessimism, which is what people feel who do not have a sense of peace about their place and purpose in today's world. Not only does the scientist feel separated from what he or she is doing, but that person is also separated by the logical and emotional. The whole person is divided, which is a microcosmic expression of the separation between science and values in the larger society.

An understanding of the dehumanizing effects of the doctrine of objectivity explains why people today are scattering into areas that are considered by society to be irrational (illicit drug use and mystic religions); they are running from the doctrine which literally attempts to make them suppress a part of themselves. To put it simply, they are trying to preserve their humanity because they choose not to adhere to conventions that violate their own psyche and spirituality.

What the objective view regards as unimportant is in fact the central part of life: finding a purpose in existence. In considering this personal development of a world view, Pirsig calls physical quietness, mental quietness, and value quietness the three cumulative levels in achieving peace of mind. If this is in fact true, it is easy to understand why so few people in modern society ever achieve a peace of mind -- they do not even spend 15 minutes a day in a state of inner quietness. Prayer and meditation are viewed by many in the late 20th century as Puritanistic, prudish, and superstitious, but overlooked is the great value in spending time reflecting upon life in

a state of physical quietness. But the belief in objectivity makes caring and peace of mind out to be unimportant and this lack of emphasis is detrimental to the well-being of Western man.

Another major flaw in Western thought is the fact that the scope of science and logic has become overexpanded to the point that important spiritual and personal human experiences and modes of thought are dismissed as unimportant. Pirsig calls this seed of separation scientific materialism, which is the idea that "what is composed of matter or energy and is measurable by the instruments of science is real. Anything else is unreal, or at least of no importance" (228). This explains how a scientist can make the following pompous statement: "Science concerns itself with the totality of existence. If science can't reach God, then God doesn't exist" (Rayl and McKinney, 44). In Lila Pirsig attributes the omission of values to a metaphysical problem in Western thought: "All the universe is composed of subjects and objects and anything else that can't be classified as a subject of an object isn't real" (99). (Later in this paper I will describe how Pirsig attempts to rectify this subject/object flaw, as well as other problems in Western thought, through his argument for a Metaphysics of Quality, which he believes describes the world much more coherently and completely than an subject/object centered metaphysics can.)

The Western world is filled with governmental, religious, and educational institutions. These institutions, Pirsig argues, are established "for the perpetuation of their own functions, and for the control of individuals in the service of these functions" (Zen, 114). What logically follows is that these institutions will create institutionalized truths. These truths created by Western logic and science are termed "frontal truths" (114). And they ultimately become the backbone of our society. To attack these institutionalized truths, a person must go outside the accepted system. The truths which "point to the falseness of axioms and postulates underlying [the] existing system

of getting at truth" are termed "lateral knowledge" (115). However, institutionalized truths are protected because people outside the socio-epistemological construct are looked down upon. The intellectual drifters who discover these lateral truths are not taken seriously because their ideas do not fit into the conventional categories. Their perceived lack of competence as thinkers keeps the message of these "deserters" from reaching a receptive audience.

Because these institutionalized truths are protected, is is very difficult to bring about needed change from within the system. Consequently, institution members are coerced into imitation. Just like the battle that Plato won over the Sophists which set the course for Western thought, what is considered the "truth" is always stressed over the good. As a result, maintaining the static - "conformity to an established pattern of fixed values" becomes more important than finding higher quality modes of thought (Lila, 116). Pirsig also finds this emphasis on categorization and imitation reflected in science itself: "Science values static patterns . . . . When non-conformity appears it is considered an interruption of the normal rather than the presence of the normal . . . . The "reality" science explains is that 'reality' which follows mechanisms and programs" (142).

The American school system is an excellent example of not only a static institution, but also a microcosm of all the problems mentioned earlier in Western thought. It is a system of imitation as its focus is not on helping students become problems solvers and truth seekers but on teacher control and the regurgitation of facts at the literal level. The pronoun worksheet given to Brian and Derrick is a perfect example of boring, ditto directed instruction. This emphasis on conformity has its effect on more that just students; it influences educators themselves as the following experiences of teacher union leader Albert Shanker indicate:

> Ten thousand new teachers each year enter the New York City school

> system as a result of retirement, death, job turnover, and attrition . . . . They represent all religions, races, political persuasions, and educational institutions. But the amazing thing is that, after three weeks in the classroom you can't tell them from the teachers they replaced. (Shanker, 48).

At the end of the 19th century, the main purpose of public education was to train students to become obedient factory workers. Consequently, special emphasis was placed on uniformity, order, and learning through repetition and memorization (Cuban, chapter one). Progress in technology has changed the role of the worker 100 years later, but little has changed in the focus of secondary schools. Rote learning and control still dominate the pedagogy of American education.

Larry Cuban examines how much schools have evolved since the turn of the century in his book How Teachers Taught: Consistency and Change in American Classrooms 1890-1980. He argues that teacher-centered instruction, which he defines as the teacher controlling "what is taught, when, and under what conditions within his or her classroom," is the only mode of instruction in use at the beginning of the century (Cuban, 1). Classroom conditions in a teacher-centered classroom include teacher talk exceeding student talk, whole class instruction occurring more frequently than individual or small group instruction, use of class time determined solely by the instructor, and classroom desks arranged in a phalanx facing a blackboard with the teacher's desk in the front of the room (3). To measure the amount of change in education throughout the century, Cuban attempts to measure any movement toward modes of instruction which he terms "student-centered." He describes this as instruction in which "students exercise a substantial degree of direction and responsibility for what is taught, how it is learned, and for any movement within the classroom" (3-4). Student-centered classroom characteristics include

students talking more than the instructor, students participating in course content selection, instruction occurring mostly individually or in small groups, and no dominating pattern of seating existing (3-4). Cuban's purpose is to measure the amount of change from teacher-centered to student-centered instruction throughout the century, not to make value judgments about the benefits of student-centered instruction over teacher-centered. (However, I would argue that student-centered instruction is more effective in helping today's students become problem solvers and truth seekers and in preparing them for future employment in our technologically advanced world.)

In arguing the fact that schools have changed little over time, Cuban points out that most of the structures that have been around since the beginning of the century were put in place not to enhance learning, but for the sole purpose of maintaining order and teacher dominance. These include seats arranged in the formation of the Roman phalanx, compulsory attendance,and the division of the day into distinct periods (9). Reformers have been unable to change these basic facets of education as they have become great institutionalized truths within American education. Cuban suggests that the presence of these mainstays have kept student-centered instruction from taking place: "Techniques that stress informal student seating, small group work, individual creativity, and learning centers around the room generate a noisier, messier classroom . . . . Such a classroom would be out of step with existing classroom and school structures . . . and most difficult to install" (10). When the Board of Superintendents of the New York City schools became distressed that a few teachers were changing the traditional placement of desks in the room, they had nonmovable furniture installed to put an end to these small attempts at reform (49). In fact, the structures put in place to maintain order in school have remained so unchanged over time that Cuban jokingly suggests that a section on failed classroom reforms should be

added to the Guinness Book of World Records (6).

Not only have changes in the structure been difficult to implement, but Cuban's research indicates that when student-centered reforms have gotten off the ground they have generally sputtered and crashed due to a public outcry against student-centered teaching practices. One example is the Eight Year Study program implemented in the Denver school system in 1938. To directly meet the needs of 10th through 12th grade students, content for the classes was chosen on "the basis of relevance to life situations" (74). Teachers and students worked together to determine what would be studied and the traditional system of grades was replaced with "new drives for learning" (77). But the facet of the program that went most directly against the institutionalized truths of American education was that traditional class periods with specific class topics were eliminated. Instead, four general topic areas were chosen: "personal living, immediate personal-social relationships, social-civil relationships," and "economic relationships." The purpose of this arrangement was to relate the class material directly to the decisions the sophomores, juniors, and seniors would be making as adults (77).

The initial evaluation report on the Eight Year Study reflected very positively upon the program. In fact, students in this program performed as well and often better than another Denver control group taken from traditional classroom settings. The program resulted in a curriculum emphasizing student interests because the students participated in course revisions (77). Because of the program's success, Superintendent Charles Greene expanded the program to include all junior and senior high schools in Denver (81).

But despite the apparent success of the new program, schools gradually went back to teacher-centered methods of instruction. Nevertheless, several maverick educators persisted with student-centered approaches and with the program until

1954, when the program finally crumbled under what Cuban termed as "a national reaction to criticism of progressivism" (81).

Another example of student-centered reforms that failed occurred in North Dakota, where national attention was drawn to the state as sweeping reforms were installed in an attempt to improve the quality of education. Through a program called New School, federal funding allowed the schools to transform teacher-centered classrooms into open concept classrooms. About 20 percent of the state's schools took part in the program from 1968 to 1972. However, funding for the program ran out in 1973, and the New School program evaporated (154-5). Cuban attributes this stoppage of funding for progressive educational reforms to the "Back to the Basics" movement, which he calls, "A phrase with far more political baggage packed into it than affection for the familiar trinity of basic skills" (210).

To see if any permanent remnants of the student-centered reforms had lasted, Cuban visited six schools where New School changes had been implemented and observed 63 teachers in 1981. He found that the major form of instruction in the classrooms revolved around the teacher-centered mode (160). Although the structure of many of the rooms remained open, shelves and blackboards had been put up as partitions while several teachers commented that the administration would soon answer their request for permanent walls so each teacher could have their own room (159). Clearly, the open concept reforms administrators had worked so feverously to install did not even last a decade.

In the final analysis of data collected on attempts at reforming secondary education, Cuban's findings demonstrate how impervious to change the institutionalized truths are in education. "What few changes," Cuban summarizes, "occurred in curricular content, classroom talk, and the formal recitation were overshadowed by the persistent continuity of teaching practices expending back

decades into the shadows of a previous century" (260). For those teachers who attempt to bring student-centered reforms into their classrooms in the face of the teacher-centered pedagogy, they will have several factors working against them. One is what Cuban calls the inescapable "twin influences" from outside the classroom: those in the system will criticize the reformer for not maintaining order and not following the required curriculum (252). On top of their classroom responsibilities, the teacher will also have to find the time and energy to learn progressive practices on their own through books, like-minded colleagues, and/or summer classes. Commenting on this extra time and effort burden, Cuban writes, "No professor, reformer, principal, or superintendent had to stay after 4 o'clock in the afternoon to put up learning centers" (256). Teacher time is also eaten away because of responsibilities in coaching, clubs, supervisions, and counseling duties. Cuban's findings clearly show how the deck has been heavily stacked against would-be reformers and how protected those structures which emphasize conformity and control are in the static institution of education. The practice of using only worksheets to instruct Brian and Derrick in language usage will not be easily fazed out of the schools.

What is particularly disturbing about the emphasis on preserving order and conformity is that those youngsters from the least structured environments and who most need education for economic mobility are most often in schools where control is valued much higher than learning. Gerald Levy's year-long examination of a New York City inner city elementary school depicts and environment where the sole purpose of instruction was to keep students working at their desks no matter how mindless and pointless the activity. Levy states in Ghetto School that the educational system which emphasizes control at any cost is also nearly impossible to change from within. "Only major institutional changes in American society," he argues, "that allow

for a more equitable treatment of its lower classes can measurably affect the brutal reality of ghetto education" (178).

Perhaps the biggest injustice in the American school system is the substandard education that ethnic minorities typically receive. For example, only 50.9% of all Hispanic Americans over 25 years old are high school graduates (Woesser and Elias, 1) while U.S. colleges actually enrolled more black undergraduates in 1960 than were enrolled in 1985 (Molnar, 71). One of the biggest factors is a discriminatory practice called tracking, which is a perfect example of the Western tendency to rigidly classify into extremes. This is the process of "between-class homogeneous grouping" which often begins in the low elementary grades (Braddock and McPartland, 76).

The practice of tracking began in the 1920s for the following purpose: "To prepare low-income, minority, and immigrant children for low-level positions in the economy (Harvard Law Review, 1319). Although most of these types of jobs have been rendered obsolete, the practice of tracking remains in today's static educational system. In the late 1930s, ability grouping began to be eliminated as educators, such as Billet in his book The Administration of Homogeneous Grouping, saw few gains and many negative effects on young people because of this practice; consequently, tracking practices reduced considerably between 1935 and 1955. However, grouping resurged in the mid 50s partly in a Sputnik and Cold War motivated attempt to give a select group of American students a better chance to compete with Soviet students. But many southern schools used tracking in response to desegregation orders while northern cities increased grouping in response to the migration of blacks into the area (1323). The result was that ethnic separation within individual schools replaced outright school segregation. When the Washington D.C. schools were ordered to desegregate, the schools instituted a massive grouping program in response; the result was that black students were disproportionally placed into the lower tracks

(1324). For a time in the late 60s and 70s, court decisions such as Hobson v. Hansen (D.D.C. 1967) and McNeal v. Tate County (5th Cir. 1975) struck down school tracking practices with disproportionate numbers of minorities in the bottom tracks on the grounds of racial discrimination. But all recent legal challenges against tracking have failed (1318-9, 1324).

The process used to determine who will be placed in what ability group reveals one big problem with the tracking system. Pointing out that tracking works on the assumption that great intellectual growth is nearly impossible for low track students, one educator argues that attempts at ability grouping are flawed because "Tracking is based on the assumption that a student's ability is static and one-dimensional and, further, that we are able to assess it" (Mumme, 6). Another study indicates that students in particularly cumulative subjects such as mathematics who would have been "late bloomers" in high school never get the chance because they have fallen too far behind while taking low ability classes in their early years (Useem 54). Also, the validity of the tests used to place young children also come into serious question. The authors of the article "Teaching Inequality" found that placement tests used did not measure intelligence very well and were ethnocentristic: "The standardized tests as well as more subjective judgments used to rank and place students effectively translate social position into student placement" (1328). Referring to the attempt to determine the abilities of young children, the authors concluded the following:

> Ability and intelligence can only be tested by asking questions that presuppose certain "common knowledge" that is in fact not common to all . . . . The measure of ability that results cannot be objective because it derives from a series of subjective decisions and assumptions about which knowledge and skills are to be valued. (1330)

The very act of putting certain young people into groups because of their "low

ability" has detrimental implications for their self-esteem. In his article "How Tracking Restricts Educational Opportunity," Samuel Brodbelt explains that "once judged as inferior (usually in the early elementary grades), individuals start *acting* inferior - the self-fulfilling prophecy takes hold" (Brodbelt, 386). Generally, teachers expect much less from their "slow track" students and these low expectations inevitably lead to the following consequences: "Few curriculum units are covered, the pace of instruction is slower, fewer demands are made for learning higher order skills, and test and homework requirements are taken less seriously" (Braddock, 77). Also, these students, even though they are the ones with the greatest needs, are usually given the most inexperienced teachers (76).

Back in the 1920s when ability grouping started in the low elementary grades, there was still an abundant number of manual labor jobs available for those educated in the lower tracks. Now, however, technology has all but eliminated these positions. Today a student educated in low ability classes graduates with no marketable skills and without the preparation necessary to further his or her education. In short, these students get worthless degree. According to one study, less than ten percent of all graduates have the necessary academic background knowledge to pursue scientific and engineering degrees in college (Anrig and Lapointe, 20). The same study indicates that about 60 percent of all students upon leaving secondary school are unable to "locate, understand, summarize, and explain relatively complicated information." Consequently, these students have great difficulty in comprehending editorials, instructional manuals, and publications such as the New York Times (20). Unless more secondary students take advanced math to prepare for the rigors of college - about 35 percent of all American students either fail or withdraw from college calculus - the number of skilled workers needed in the United States to fill important technical jobs will not be met (Useem, 54-5). These disturbing findings lead to the

conclusion that the United States cannot afford to graduate a large group of students ill prepared to enter our technologically-dominated work force.

Unlike the United States, most nations do not track their students. Brodbelt points out that in Japan, which graduates 91 percent of its students, it is assumed that all students can do the necessary class work through "individual effort, extra teacher tutoring, and parental help and encouragement" (Brodbelt, 386). Elizabeth Useem found that students considered average in many countries enroll in mathematics classes equivalent to those that are limited to a "smaller, more elite group" in American schools (56-7).

Because of the detrimental effects on young people and their academic growth, the practice of low elementary ability grouping in American education needs to end. Instead of teaching advanced material to an elite track of "gifted" students, the teachers themselves must become gifted enough to make truth seekers and advanced problem solvers out of as many students as possible. However, because tracking - like other modes in education that have long become outdated - exists as an institutionalized truth in the system of American education, it will be very difficult for reformers to eliminate this regressive practice from the system.

In not only American education but in our entire society at large, these intellectual, spiritual, and social divisions all cumulate into the greatest problem facing modern man: we live in an existential world under the illusion that nothing - institutions, technology, and even ourselves - is controllable. We are cut off from our emotions and from our spirituality because of the divisions and restrictive conventions in Western thought. Pirsig laments the tragedy that the genetic flaw in reason has caused individuals: "The passions, the emotions, the affective domain of man's consciousness, are a part of nature's order too. The central part" (Zen, 287). When people are asked to deny their emotions and creativity to fit into the modes of Western

thought, they have two options. One option is to become a romantic and escape from Western logic and from technology whenever and wherever possible. A second option is for people to repress and deny the central part of their nature and to conform to the system's conventions. Neither of these options is good for those truth seekers who want to preserve their humanity and stay in sync with the true nature of reality.

Can this flaw in Western thought be overcome? Will there ever be a point at which art and technology can once again, as in the time of the early Greeks, become reunited? Will Western logic change so that the conventions for finding answers will allow the solver to include the central part of his or her existence in the search? These crucial questions need to be addressed for the sake of modern man. Pirsig believes that if all individuals can grasp one concept, then the separations in Western thought will disappear; this concept is the term that the author calls Quality.

When Pirsig was a college English instructor, a simple comment from a colleague - "I hope you are teaching Quality to your students" - rekindled a search that had transfixed him previously in his life, and it led him on a new quest to figure out what this concept really meant. Although he could not come up with a concrete definition of the term, he convinced his students that they knew what it was in their own mind, and he used it as the goal for all student writing assignments. After being asked by his colleagues whether Quality exists in the subjective or the objective, Pirsig argued that it exists in neither, but is a third metaphysical entity from which subject and object are derived: "The sun of Quality does not revolve around the subjects and objects of our existence. It does not just passively illuminate them. It is not subordinate to them in any way. It has *created* them. They are subordinate to *it*!" (Zen, 234). Because subject and object can be deduced from Quality, then to possess Quality is to bridge the gap that has disunified classical Western thought. The author found that when he assumed that "Quality is the Buddha," then the currently disunified

areas of religion, art, and science become unified (251). Ultimately, the author sees Quality as the solution for removing the genetic mutation in reason that is destroying each individual's potential contribution to society: "A real understanding of Quality *captures* the System, tames it, and puts it to work for one's own personal use, while leaving one completely free to fulfill his inner destiny" (217).

In describing the make-up of Quality much more thoroughly in his second book, Pirsig constructs what he terms his "Metaphysics of Quality." He begins his argument with the assumption that Quality is the "primary empirical reality of the world (Lila, 67). According to Pirsig, this system provides "a better set of coordinates" to interpret the world with because it is more "inclusive" than the conventional metaphysics due to the limiting assumption in traditional thought that subjects and objects make up the world and anything else is considered unreal (99-100). Pirsig states that "the reason values seem so woolly-headed to empiricists is that [they] keep trying to assign them to subjects and objects . . . You get all mixed up because values don't belong to either group. They are a separate category all their own" (66-7). Therefore, the values of art, morality, and religion have been deemed unverifiable because of the subject-object metaphysics, not because values cannot be proven through everyday experiences (100).

Pirsig compares the inability of the conventional metaphysics to recognize values to the inability of zoologists to classify the platypus because the animal suckles its young like a mammal but also lays eggs like a reptile. Observing that many such "monster platypi" exist because of our flawed metaphysics, Pirsig gives the following as examples: "free will vs. determinism" and "the apparent purposelessness of life" (Lila, 102). These paradoxes disappear under the Metaphysics of Quality.

One of the biggest problems in Western thought is the assumption that everything is controlled in terms of the laws of science. "All the social sciences," Pirsig

points out, "were founded on the bedrock metaphysical assumption that these physical cause-and-effect laws of human behavior exist" (156). However, the incident discussed earlier in the paper about the anthropologist who failed to gather accurate information on Indians using objective, scientific methods demonstrates that not every aspect of our world function according to the laws of science; "Objects of scientific study are . . . supposed to follow the laws of cause and effect in such a way that a given cause will always have a given effect, over and over again. Man doesn't do this" (54). But instead of everything being an extension of matter as it is in the substance-dominated metaphysics, substance is just one (inorganic) of the four patterns of value (the other three are biological, social, and intellectual) in the Metaphysics of Quality (149).

How can substance be considered a pattern of value? Explaining that discoveries in science have made the term "causation" outdated due to the current findings in modern physics, Pirsig argues that it is more accurate to substitute the word "value" for "cause" in describing the activities of molecules and atoms:

> In classical science it was supposed that the world always works in terms of absolute certainty and that "cause" is the most appropriate word to describe it. But in modern quantum physics all that is changed. Particles "prefer" to do what they do . . . .What appears to be an absolute cause is just a very consistent pattern of preferences. Therefore, when you strike "cause" from the language and substitute "value" you are not only replacing an empirically meaningless term with a meaningful one; you are using a term that is more appropriate to actual observation. (104)

Because substance is an inorganic pattern of value, the word "substance" can be substituted in favor of "a stable pattern of inorganic values" (101). Not only does the Metaphysics of Quality more accurately describe scientific relationships, but it unites

two areas that are disjointed in Western thought: objects and values. Pirsig argues that "the greatest benefit . . . is that it allows an integration of physical science with other areas of experience that have been traditionally considered outside the scope of scientific thought . . . . Once this definition is complete a huge integration of the humanities and sciences appears in which platypi fall by the hundreds" (105).

The last significant aspect of the author's value-centered metaphysics is the two different types of Quality in this world. To explain them, he uses an account from Ruth Benedict's Patterns of Culture about a tribe of 19th century Indians in Zuni, New Mexico. Because of one Indian's mannerisms which were at odds with the tribe and his boasts that he could not be killed, he was branded a witch and tortured until he would confess to his witchcraft. However, despite his shoulders being crippled for life, he refused to confess; consequently, the war chiefs responsible for these false accusations were imprisoned. This maverick ended up staying in the tribe forty more years and becoming the governor of Zuni.

Pirsig calls the standards of the tribe which the rugged individualist violated "Static quality," which is good that is "conformity to an established pattern of fixed values and value objects" (116). These are the patterns that hold nations together and prevent degeneracy. The accused witch represented the "Dynamic Quality" that Pirsig defines as "the pre-intellectual cutting edge of reality, the source of all things, completely simple and always new" (116). Dynamic quality is badly needed so that organisms can continually evolve in order to survive. "If you don't have the static patterns of scientific knowledge to build upon," Pirsig explains, "you're back with the cave man. But if you don't have the freedom to change those patterns you're blocked away from any further growth" (222). An excellent example of a Dynamic institution is a free market economy because supply and demand are continually changing in accordance to what people are valuing through buying and selling (221).

The conflict comes about because it is very difficult to determine which Dynamic challenges to Static patterns are positive change that is needed in order for positive change to take place. In other words, "How can you tell the saviors from the degenerates?" (222). In the classic mode of thought you cannot. But the Zuni who make the decision not to kill the misfit obviously made a good decision (a Quality decision) because without the maverick's ideas and leadership, the Zuni may not have been able to survive as a society. Those leaders who made this decision were following a gut feeling or hunch; this is viewed as insignificant in a subject-object metaphysics. but in a value-centered metaphysics, the gut feelings or hunches of the tribe leaders were Quality itself. Because they followed Quality, the Zuni leaders made a decision which resulted in positive, Dynamic change for their society. The lack of Quality is the very problem in American education and in other large Western institutions; the stable patterns have become such rock-solid institutionalized truths that the Dynamic change needed to evolve with the times cannot be instituted. The worksheets that resulted in little retention in Brian and Derrick's knowledge are as much a permanent fixture in American schools as the blackboard in the front of the room. Without the possibilities for change in even the oldest and most conventional modes of thought, an institution cannot move toward Dynamic Quality. No wonder Pirsig discovered as a college instructor that "The whole idea of individual creativity and expression in the classroom was really basically opposed to the whole idea of the University" (Zen, 195). The institutions inherently devour anything that does not conform in order to preserve itself.

An understanding of two of the most damaging platypi in Western thought - free will versus determinism and meaningless in existence - disappear under a value-centered system. Because man is controlled by the cause-and-effect laws of the universe under the subject-object metaphysics, this gives the impression that man has

no freedom to make choices and alter his destiny; thus, a paradox is the result (Lila, 139). However, in the Metaphysics of Quality, where everything is not an extension of substance, this problem does not exist because a person's behavior is only controlled by static patterns of Quality. But people can control their own behavior when they follow Dynamic Quality. (Lila,156).

Another platypi that evaporates under the Quality Metaphysics is that life contains no inherent purpose. Pirsig articulates the problems associated with this belief in Zen as he calls this mode of thought the "ghost of normal everyday assumptions."

> This is the ghost . . . which declares that the ultimate purpose in life, which is to keep alive, is impossible, but that this is the ultimate purpose of life anyway, so that great minds struggle to cure diseases so that people may live longer, but only madmen ask why. One lives longer in order that he may live longer. There is no other purpose. That is what the ghost says. (Zen, 78)

So through the view of the conventional subject-object metaphysics, the world is a "completely purposeless, valueless place . . . . Nothing is right and nothing is wrong. Everything just functions, like machinery" (Lila, 278). This does not give the average human the motivation needed to get out of bed in the morning. However, in the value-centered system, every organism, from the smallest amoeba to the greatest scholar, and every group, from the smallest sub-culture to the largest corporation, are pursuing the same goal: to Dynamically improve and preserve through a migration toward Dynamic Quality (139 and 300). Through this purpose for all, the Metaphysics of Quality unite Darwin evolutionary theory with "teleological" theories that argue for life having a purpose. This unification is very consistent with the findings of Jean Bapatiste Lamarch, the first major evolutionist, who argued that all life was moving

toward perfection (144).

Ultimately, a value-centered metaphysics is a great improvement over the current system because it eliminates the truth traps, separation, and platypi that are remnants of the defects in Western thought. But the only way positive change can take place in the world is for individuals - those foot soldiers within the various Western institutions - to lead lives that emit Quality in everything they do - and to actively pursue Dynamic Quality. Only when people start searching for Quality in an effort to break out of their own imposed divisions can we begin to repair the genetic flaw in Western thought.

The truth seekers, however, must always be wary of the various traps and distractions in our world, and no one - no, not even Robert Pirsig - is immune. Lila, the book that some readers waited 17 years for, is very disappointing in some respects as the author dabbles in multiple narrator perspectives and goes off on irrelevant tangents describing his sex life, his "star struck" meeting with Robert Redford, and a thoroughly nauseating discussion on the difficulties of being a celebrity--all very low quality endeavors. More disturbing, however, is a letter to Redford offering suggestions about a motion picture based on Zen that was - Thank God - never made. Indicating very mixed feelings about selling the film rights to his first book, Pirsig calls the prospect of the Zen movie in his recent book to be "a social pattern of values, a film, devouring an intellectual pattern of values, his book. It would be a lower form of life feeding upon a higher form of life. As much it would be immoral" (Lila, 259). But no moral conflict is apparent in the pandering letter the author writes to Redford in which he makes numerous suggestions on how to film Zen including who should play Phaedrus, which shows tremendous naivete on Pirsig's part to think that Redford would go to all the trouble to get the rights to the book and have someone else play Phaedrus. The author also tells Redford that when filming does begin it will take

"definite priority" over his second book (DiSanto, 238).

The most important motif in Zen is the ongoing maintenance of the motorcycle, which represents the ongoing prevention of those traps which hinder travel on the Quality track of life. However, Pirsig, in telling Redford that his 1964 Honda Superlark used in his original journey in Zen would be available, shares that "I'm ashamed to say, it needs some maintenance" (238). Along with all the intellectual mountains he has invited his readers to explore, this great intellect's life should also serve as a warning and example to all truth seekers of what is perhaps the greatest truth trap of all: success.

Pirsig's example shows that all individuals are susceptible to falling into traps which take them off the Quality track, even those who help others get on and travel on the Quality track in the first place. But if enough people can avoid the traps of the subject-object metaphysics, needed Dynamic change will be the result. If enough educators become disgusted with the state of American education and no longer view the regressive in schools' conventions as unchangeable, then they can pursue Dynamic Quality, and the Static system can be changed. Quality is the only hope for students like Brian and Derrick. They deserve the chance to study in a school system where their efforts to become truth seekers and innovators are facilitated rather than hindered. A Quality-dominated educational system will emancipate young people from the static patterns of imitation and guide them in embracing excellence in all of their intellectual endeavors.

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